

A MISCELLANY of SYSTEMS In OSN 15 I included some notes on various German systems, mostly based on information from Jeannot Buteux/*CONSTRUCTORAMA*, and now more from the same sources on various non-German systems. As before I'll also use material from *EISENZEIT* and other sources where appropriate.

ASSEMBLO This, as explained in 15/420, is the French original of the DINKY BUILDER type systems. A 1955 Price List shows 7 basic sets, 0-5 and LUXE, with the latter costing over twice as much as the No.5. There are also Sets A and B containing Wheels, and conversion sets 0 bis to 5 bis. The 5 bis cost only about a third of the difference in price between the No.5 and the LUXE, so most of the extra price of the LUXE probably went into better packaging.

Spare parts are also listed as follows: • Plates 1-27, but not the Nos. 28-40 that are shown in MCS. No.28 is a large rectangle and the others are the ones with tabs on both sides (see 15/420). • All the Rods shown in MCS including the 4 Angled Rods, H-L. • Of the Wheels in MCS the Pulley is listed, and one Flanged Wheel but its size isn't indicated, also the Wheel with Tyre, No.204, and the Axle Stops.

Fewer sets are shown in the 1955 List on p7 of MCS, but that was the range stocked by a particular shop.

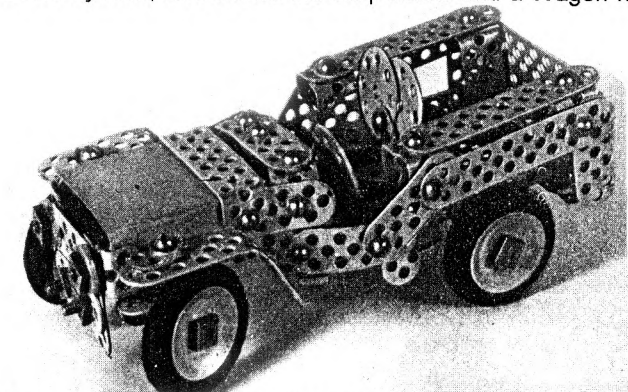
Since OSN 15 David Hobson has sent details of another, later ASSEMBLO patent. Its Convention Date is March, 1932 and it's in the name of P.L.Montchanin of 5 Rue Baudin, Rueil, Seine-et-Oise; the French and UK numbers are 752439 and 408801. The claim was that the tabs would be formed to allow the Rod to be a sliding fit in them, except that one tab on each edge would be partly divided, as below, and the shorter part closed up to grip the Rod.

This made it much easier to insert the Rods. I haven't any ASSEMBLO parts to hand but I suppose they incorporate this feature. STANLO do, but not all DINKY BUILDER parts. Those in a 1953 set do, but I'm told that earlier postwar ones don't - I haven't checked any prewar ones.

David also pointed out that the idea of plates edged with interlocking socket tabs that could be pinned together wasn't new, but was included in 2 earlier patents. No.140329 of 1919 (Edwards & Barker) used elements such as that below, for toy structures and making buckets and moulds for sand; No.166789 (Pierce, 1920) was also for sand moulds, and various shapes were to be made from formed or folded cardboard with just the outside edges pinned together, though how the sockets were to be made isn't clear.



BOY A leaflet introduces Rubber Tyres in a Box H for this Dutch system, and shows the Jeep below and a Wagon for

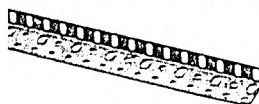


0-gauge track. Except for the Wheels on the Jeep, and the larger than usual square Nuts, the parts look like TRIX, though there is no positive indication of size. The boxes needed for the Jeep are 3 of No.1, 2 of No.1A, and 2 of H. There's no indication of date but at a guess the Leaflet might be from the early 1950s.

CONSTRUC The name of this French system was regis-

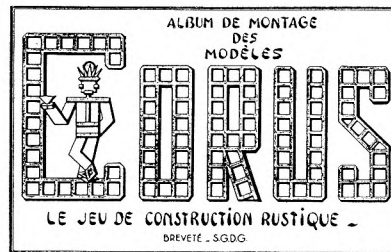
tered in 1948. The illustrations on a manual cover shows the Crane opposite and a boy working on the chassis of a 6-wheel Lorry. The structural parts - Strips and perhaps Angles and other sections - don't appear to have holes in them, and seem to be held together by push-on Clips.

CONSTRUCTOR There is much to be said about the different phases of this French system and I hope to return to it in a future Issue when I have more details. One part that's shown in MCS but I hadn't noticed until I saw it in an illustration from Jeannot, is the



1*2h section A/G (below), with all the holes in the shorter flange and every other hole of the inner row of the other one, slotted. MCS lists both these Girders and a flat Plate version, each 7,11 & 31 holes long. So with the hole pitch of 11mm, the length of the longest would be nearly 13½".

CORUS Another French system, this one patented in 1924. All that's available is the cover of the manual shown opposite. If the figure, or the letters of the name, are made from actual parts, how are they joined? And what are they made of? The word rustique may mean robust in this context.

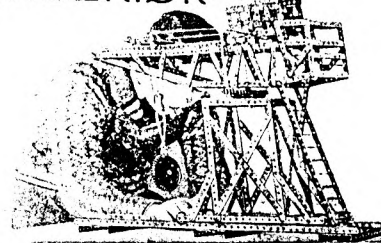


D.V.s INGENIØR This Danish system was mentioned in 13/360 and again all I have on it is the manual cover. Under the name (opposite) is Nr.7200, and apart from that there's a smart looking boy in a collar and tie, holding 2 Strips that are joined together by a N&B, which also holds what may be an Angle Bracket.



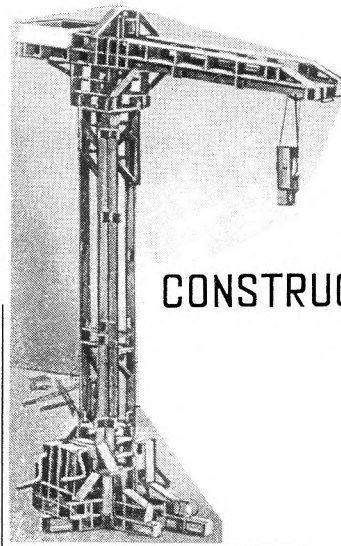
DEN DANSKE INGENIØR Another Danish system which was mentioned in 10/266 as being prewar. A copy of the box lid from a No.1 set shows the medium sized Crane opposite, made from Strips, A/Gs, and a few Perforated Plates, including some that look 5*11h size, flanged on the long sides. The load on the Hook appears to be a Pulley of perhaps 6h diameter fitted with a MÄRKLIN-style Gear Ring.

DEN DANSKE INGENIØR



EDISON A box lid of this Czech system shows a boy looking at the Grab on the next page, with a large High-Level Railway Bridge in the background, and a girl with a Swing containing a doll. In one corner is a shop window with sets and other models in it, and children and a young woman looking in. Her dress looks to me to date from the late 1920s or thereabouts.

As far as can be seen most of the parts in the models, Strips, A/Gs, and Flanged Plates, look like the ones shown in MCS, but a few don't. For instance the 8-spoke Wheel in



CONSTRUC

DEN DANSKE INGENIØR This Danish system was mentioned in 16/444, and now David Hobson has kindly lent me a selection of parts, including some which were only in the largest outfit, and the manual that was with them. DEN DANSKE INGENIØR (DDI from now on) had 93 parts in all including a good selection of Strips, Girders (Angle, Flat & Braced), and rigid Plates, but no Flexible Plates. Examples of these are shown on the facing page, together with all the other parts, some unusual Gears among them. (My) English names for the parts are in the Set Contents underneath.

The PARTS A list of the parts follows, with points of interest, and those seen are asterisked.

• **The Basics** The hole pitch is generally between 12.9 & 13.0mm but with extremes of 12.7 & 13.2mm. Holes are usually 4.4mm in Strips and 4.5mm in Plates, but a few are 4.2mm. Strips & Brackets are 13.0mm wide. Apart from the Flat/Angle Bracket, all the Strips & Brackets have large-radius ends, and the Plates have square corners. The longer Strips are about 1mm thick, and the 3-7h, and the Brackets, are mostly .85mm. Plates are .8mm.

With the one or two exceptions noted all the parts are steel, and apart from Axles & the like, all those seen are painted, even the Brackets. Strips & Brackets are dark green, and Plates & Wheels medium red. A few of the parts, at random, are a medium green or a dark red. Apart from the variations in hole size & pitch, the parts are well made, and the paint finish is mostly quite good.

• **Strips**, #1-8. The lengths listed are 2,3*,5*,7*,9*,11*,19* & 23*h, but the 2h seen is a Flat Bracket. **DAS**, #15*,32,34,35. The 1*5*1h, #15, is 67½mm long o/a.

• **Brackets**, #8*,11*,12*,13*,14,29*,30*,31,33. Apart from being slightly wider the Flat Bracket is almost identical to the MECCANO part, and the A/B is made from it. The Double Bracket is 15mm wide. The top section of the Double Bent Strip is 15mm long and the base holes are at 28mm pitch. The Rev. A/B is similar to M124 but without the slotted hole.

• **Flat & Angle Girders**, #62-69, #50-57. Both are in 23,19, 11,9,7,5,3, & 2h lengths. None have been seen.

• **Perforated Plates**, #10,22,26,38,39,40*,41,42*,43,44. 4 of the **Curved Plates**, #76*,77, with a 1h overlap, make a 12h circle of 50mm diameter. The curved top of the cab of the Crane on the manual cover/lid label is made from a #76. The circumferential holes are at standard pitch but the longitudinal ones in the one example seen are at 13.2mm pitch.

• **Flanged Plates**, #36*37*, are 65 mm wide o/a. These illustrate the variability of the parts – the 5*5h/5*11h have 4.2/4.5mm holes at 12.7/13.1mm pitch, and one 5*11h is a dark red while the other is a medium shade.

• **Braced Girders**, #70-75, are 23,19,11,9,7,5h long. A decorative plate but none seen, so of unknown rigidity.

• **Pulleys**, #9,9A*,58,59*. #9A, the Fast version of #9, is 24½mm o.d., and the width of the vee varies from 5½ to 6mm in different examples. The discs are non-ferrous, probably brass. #59 is 43mm Ø with a 7mm wide vee.

• **Flanged Wheels**, #60*,61. Looking at the illustration of #60, the boss sits on the 5mm deep upward beelling at the centre, and the edge of the disc is formed upwards into a 'Z' section, with a tread 4mm wide and a flange 3mm deep. The metal is quite thick giving a rigid wheel. The o.d. is 68mm and the 4 face holes are on a pcd of about 44mm.

• **Bush Wheel**, #28*. 36½mm Ø with 4.2mm face holes at 25mm pcd. The **Wheel Disc**, #28A, is shown with a large centre hole, presumably for the boss of the Bush Wheel.

• **Rubber Ring**, #46*, for Pulleys 9,9A. Black rubber now gone hard, 28mm o.d. & 6mm wide. One has a 'V' tread on its sidewalls and is a slightly different size (27/6½mm). **Tyre**, #46A, for the 43mm Pulley, #59.

• **Large-toothed Gears**, #47*,47A*,48*,48A*. #47,48 have 'outline' teeth of the STABIL 1926 patent type (see 13/349) but the discs are held together by a boss. #47 has 14 teeth, and #48, 42, like their STABIL counterparts, but their

Leading Particulars

Name DEN DANSKE INGENIØR

Country Denmark

Maker unknown.

History From before 1948, 1935 is possible, to ?.

Hole dia. 4.4 – 4.5mm.

Hole pitch 12.9 – 13.0mm.

Sets Nos.3/0, 2/0, 0, 1, 2, 3, 4, 5; linking sets 0A, 1A, 2A.

Material/Finish Steel; dark green & medium red. Some parts in dark red & medium green also known.

Boss Zinc, painted or brassed. 9.5-10.0mm o.d., 4.1mm bore, s/t ⅛" BSW. Most have EIFFEL on the outer face.

Fixing ⅝₃₂" BSW brassed steel N&B. Square Nuts 6.3mm A/F; 5.6mm Ø CH Bolts, 6, 9½, 19mm u/h.

Axles 3.95-4.00mm Ø.

diameters (29½ & 79mm o.d.) are slightly greater because of DDI's greater hole pitch. The teeth are a little wider too, 11mm for #47 & 10mm for #48. The pair run together at 4h spacing.

STABIL Gears can be used as bevels though the tooth engagement is not large, and to give a better engagement #47A (right) & 48A are simply one disc with boss, a sort of contrate.



• **Fine-toothed Gears**, #78,79,80,81. #80 & 81 are shown with 50 & 15 teeth and probably run together at 2h spacing. If so the Mod. would be .8 (32 D.P.), so rather coarser than MECCANO. #79 looks like a Bevel, and possibly #78 is a Contrate, or even a larger Bevel.

• **Bosses**. All are non-ferrous, probably zinc die-castings, but it's hard to be sure because some are brassed and the others are painted red. All are single-tapped ⅛" BSW and all except those fitted to the 24½mm Pulleys have 'EIFFEL' cast around the hole in the end face. A Danish system called EIFFEL with red & green parts, and, probably, some marked EIFFEL, was noted in 16/458, 17/491, & 23/682. So if the present parts are DDI there would seem to have been a connection between the two systems.

All the bosses have 4.1mm Ø bores but their diameters vary from 9.5 to 10.0mm. All are 8½mm long and the peening is either a normal ring or else wider, usually with some radial splitting.

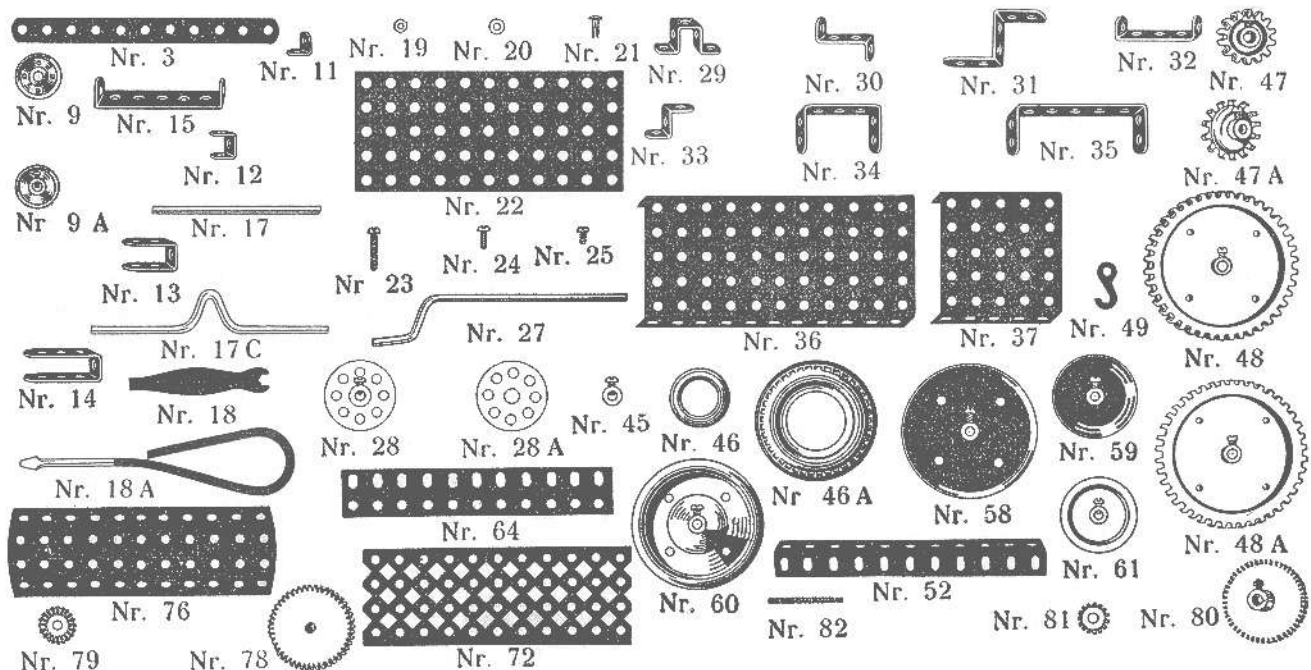
• **Axles**, #16*,17*,17A*,17B*,17D*,17E*. Their diameters vary from 3.95 to 4.00mm; their lengths are not given in the Manual but those found are 6,8,10,14½,22½,25cm long. **Crankshaft**, #17C*. 118mm long & 4.04mm Ø, with an 18mm offset. **Crank Handle**, #27*. 4.00mm Ø, 137mm long o/a, with a shaft of 100mm & a 27mm handle offset 20mm (2 were found plus a third, similar, but 4.27mm Ø). All these parts have slightly rounded ends.

• **Collar**, #45. Not seen.

• **Hook**, #49*. .8mm thick brassed steel, 25mm long, with a 4.5mm hole.

• **Fixings**. All are brassed steel and the thread is ⅝₃₂" BSW. The pressed **Nut**, #19*, is square, 6.3mm A/F, & 2.2mm thick. Hex Nuts are shown in the Manual. **Bolts** #23*,24*,25* are 6,9½,19mm u/h and have 5.6mm Ø cheeseheads, though the 9½mm has a slight taper. The **Washer** #20* is 9.0mm Ø & .85mm thick.

• **Bifurcated Rivet**, #21*. This part was in Sets 0-5 with 10 in the No.5, and 8 were found among the present parts. It is coppered steel with a very flat 7.2mm Ø mushroomhead, and the 3.7mm Ø shank is 11mm long, forked to a depth of 8mm. It is used as decoration in several manual models, either pushed into a hole or over the edge of a Strip. In either case the fork tails would have to be bent to hold it in place but are



PART \ SET:	3/0	2/0	0	1	2	3	4	5
1. Strip, 23h					6	6	6	10
2. - 19h			2	4	4	4	4	10
3. - 11h		2			4	6	6	10
4. - 9h	2	2	2	6	8	10	10	12
5. - 7h	2	2	4	6	8	10	10	12
6. - 5h	2	2	4	4	8	10	10	12
7. - 3h	2	2	4	6	8	10	10	12
8. - 2h	2	2	4	4	6	8	10	12
9. 24mm Pulley, Loose	2						2	2
9A. 24mm Pulley, Fast		4	4	4	5	6	6	8
10. Perf. Plate, 5*23h								
11. Angle Bracket	2	4	4	6	8	10	12	15
12. Double Bracket		2		1	1	2	3	3
13. Dble Brkt, 2h deep			1	1	1	1	2	3
14. Dble Brkt, 3h deep					1	2	2	4
15. DAS, 1*5*1h	2	2	4	6	10	12	12	20
16. Axle					2	2	2	4
17. Axle		2	2	2	2	4	4	4
17A. Axle							2	3
17B. Axle	...	...	...	...	...	...	1	2
17C. Crankshaft							1	2
17D. Axle	...	...	...	...	...	...		1
17E. Axle								
18. Span'driver	1	1	1	1	1	2	2	2
18A. Screwdriver					1	1	1	1
19. Nut	10	15	15	25	50	75	100	150
20. Washer			4	5	8	10	10	10
21. Bifurcated Rivet			3	4	6	8	8	10
22. Perf. Plate, 5*11h								
23. Bolt	2	2	4	4	5	10	10	25
24. Bolt	3	3	3	6	15	15	15	25
25. Bolt	5	10	8	15	30	50	75	100
26. Perf. Plate, 5*9h								
27. Crank Handle		1	1	1	1	2	2	2
28. Bush Wheel		1	1	1	1	1	2	2
28A. Wheel Disc							1	2
29. Double Bent Strip			1	1	1	2	2	3
30. Reversed A/B, 2h					1	2	2	4
31. Rev. A/B, 2*2*2h	...	...	...	...	...	2	2	4
32. DAS, 1*3*1h	...	...	...	...	...	1	9	10
33. Reversed A/B	...	...	...	...	...	1	2	6
34. DAS, 2*3*2h	...	...	...	...	...		2	6
35. DAS, 2*5*2h	...	...	...	...	...		2	4
36. Flanged Plate, 5*11h			1	1	2	2	2	4
37. Flanged Plate, 5*5h		1		1	1	2	2	4
38. Perf. Plate, 5*19h								
39. Perf. Plate, 5*7h	...	...	...	...	...	...	...	1
40. Perf. Plate, 7*7h							1	2

PART \ SET:	3/0	2/0	0	1	2	3	4	5
41. Perf. Plate, 7*9h								
42. Perf. Plate, 7*11h	...	...	...	...	...	...	...	1
43. Perf. Plate, 7*19h								1
44. Perf. Plate, 7*23h	...	...	...	...	...	...	...	...
45. Collar						2	4	10
46. Rubber Ring	...	...	...	...	4	4	4	4
46A Tyre							4	4
47. Large-Tooth Gear, 14t	...	...	...	...	...	1	2	2
47A. - - 'Contrate', 14t								1
48. Large-Tooth Gear, 42t	...	...	...	...	...	1	1	2
48A. - - 'Contrate', 42t								1
49. Crane Hook	1	1	1	1	1	1	2	2
50. A/G, 23h								4
51. A/G, 19h	...	...	...	...	...	...	4	4
52. A/G, 11h								4
53. A/G, 9h								
54. A/G, 7h								
55. A/G, 5h								
56. A/G, 3h								
57. A/G, 2h	...	...	...	...	...	...	4	4
58. Pulley, large							2	4
59. Pulley, 43mm	...	...	...	...	...	...	4	4
60. Flanged Wheel, 68mm								4
61. Flanged Wheel, small	...	...	...	...	...	...	4	4
62. Flat Girder, 23h								
63. Flat Girder, 19h								
64. Flat Girder, 11h								
65. Flat Girder, 9h								
66. Flat Girder, 7h								
67. Flat Girder, 5h								
68. Flat Girder, 3h								
69. Flat Girder, 2h								
70. Braced Girder, 23h								
71. Braced Girder, 19h								
72. Braced Girder, 11h	...	...	...	...	...	...	...	2
73. Braced Girder, 9h								
74. Braced Girder, 7h								
75. Braced Girder, 5h								
76. Curved Plate, 4*11h	...	...	...	...	...	...	...	4
77. Curved Plate, 4*9h								
78. Contrate? Gear								
79. Bevel ? Gear								
80. Gear Wheel 50? t								
81. Pinion 15? t								
82. Screwed Rod ?								
Model Leaflet	#1	#1	#2	#2	#2	#2		
Manual							1	1

SET CONTENTS

so stiff it would be difficult to do so even using pliers.

• **Tools.** The **Screwdriver #18*** found in the parts has a shorter handle than in the illustration. The nicked wire is 3.95mm Ø, the length o/a is 134mm, and the handle is 53mm long & 26mm wide. The tip is parallel but has probably been ground to that shape. The **Span'driver #18A**.

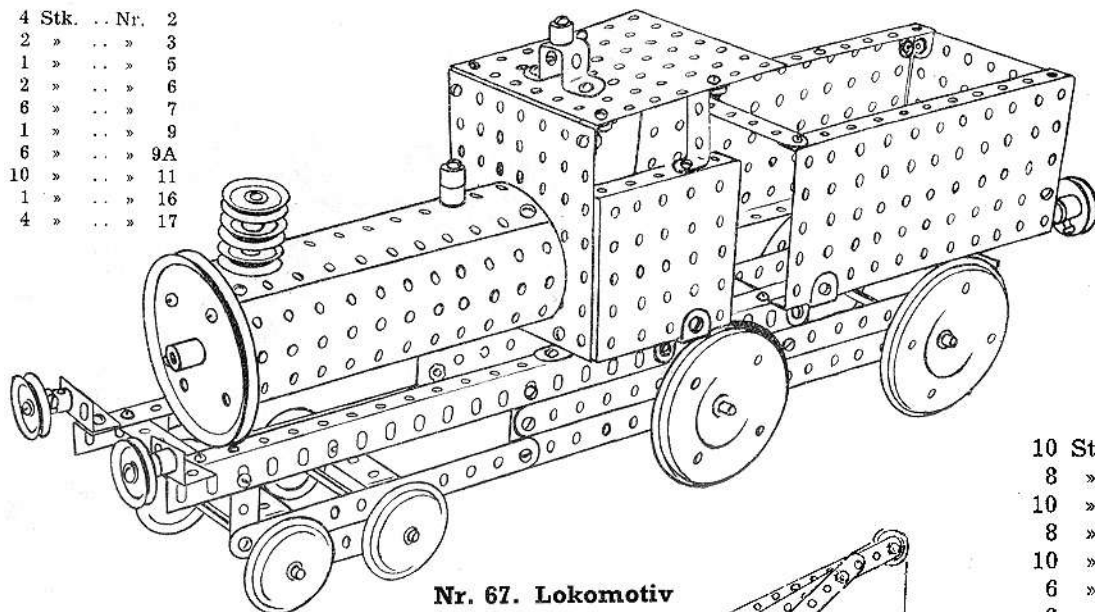
• **Screwed Rod (?)**, #82. Not seen but it looks like a short Screwed Rod in the Illustrated Parts.

The SETS The contents of the 8 basic sets occupy 6 pages in the manual and have been condensed into one table on the previous page. The contents of the 3 linking sets in the system, 0A, 1A, & 2A, are also in the manual. Apart from the change from Loose to Fast Pulleys between 3/0 & 2/0, the sets are probably progressive, and there may be some errors in the numbers of Strips and other parts in the smaller sets because they don't all quite agree with the contents given for the linking sets.

The manual also has photos of all the basic sets. The No.4 has a tray of parts above those in the bottom of the box, and the No.5 has 2 such trays. The lids of Sets 4 & 5 are shown and have a label like the one in MCS (also like the manual cover shown later but with a light, wider border with a pattern of parts on it). With David's parts was the bottom of a No.0 box – it is 6½"11¾" in size and is fawn cardboard with 6 orange trays inside to create partitioning.

The MANUAL SUMMARY •Name: DEN DANSKE INGENIØR •Details of maker: none. •Dates &/or Ref Nos: none. •Page size: 258*149mm. •No. of pages: 52 unnumbered inc covers. •Language: Danish. •Printing: line drawings of models. •Page Nos. of Illustrated Parts & highest PN: 4-6,82. •Page Nos. of Set Contents & highest PN: 7-9,12,13,16-18. •Sets covered: 3/0,2/0,0,1,2,3,4,5. •No. of models for each set: 11,10,5,12,11,10,7,7. •Name, Model No., Page No. of first & last model of each set: 3/0: Sækkevogn,1,19; Flyvemaskine,11,20. 2/0: Trækvogn,12,20; Mølle, 21,22. 0: Vejhøvl, 22,22; Telefon,26,24. 1: Hejseværk,27,24; Svingbro,38,27. 2:

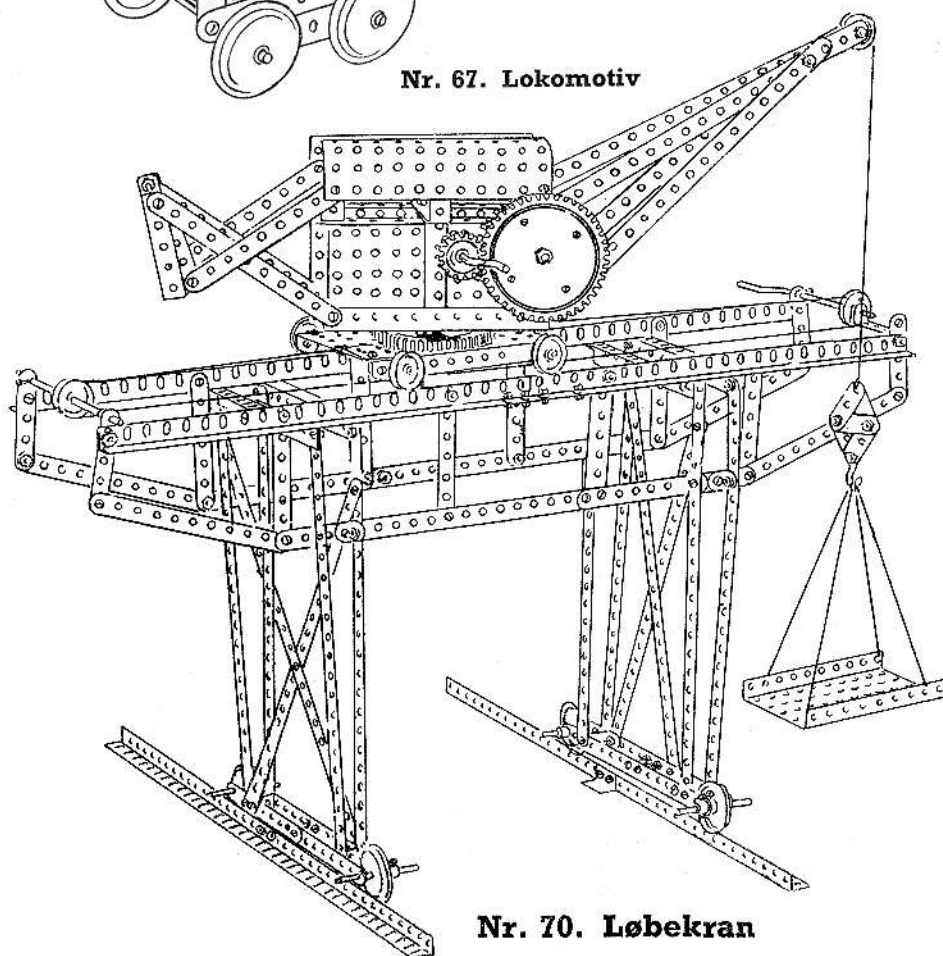
4	Stk.	..	Nr.	2
2	»	..	»	3
1	»	..	»	5
2	»	..	»	6
6	»	..	»	7
1	»	..	»	9
6	»	..	»	9A
10	»	..	»	11
1	»	..	»	16
4	»	..	»	17



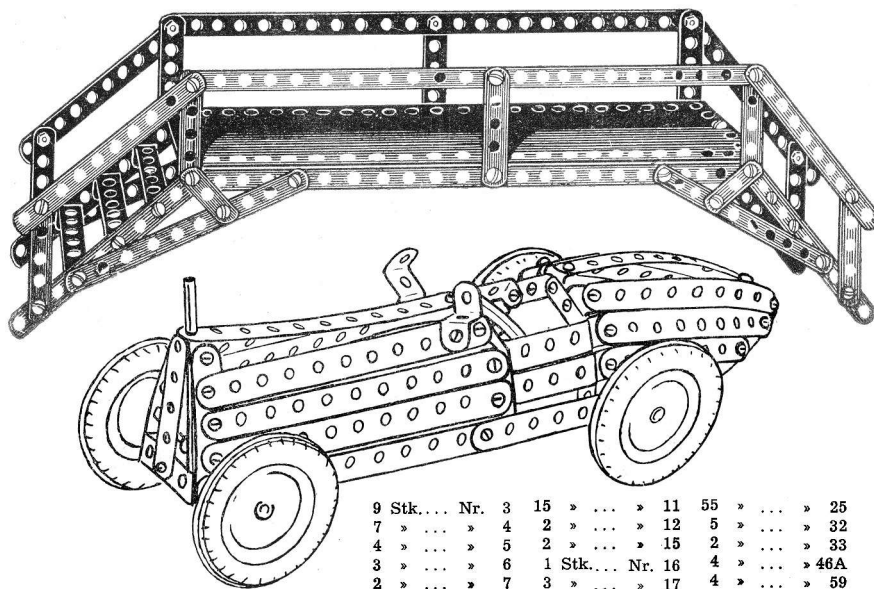
Nr. 67. Lokomotiv

75	»	..	»	19
5	»	..	»	23
70	»	..	»	25
1	»	..	»	29
4	»	..	»	30
4	»	..	»	33
2	»	..	»	36
2	»	..	»	37
1	»	..	»	40
8	»	..	»	45
2	»	..	»	50
2	»	..	»	57
1	»	..	»	58
4	»	..	»	60
4	»	..	»	61
3	»	..	»	76

10	Stk.	...	Nr.	1
8	»	...	»	2
10	»	...	»	3
8	»	...	»	4
10	»	...	»	5
6	»	...	»	6
6	»	...	»	7
1	»	...	»	9
6	»	...	»	9A
12	»	...	»	11
1	»	...	»	14
4	»	...	»	16
2	»	...	»	17
3	»	...	»	17A
150	»	...	»	19
25	»	...	»	23
25	»	...	»	24
100	»	...	»	25
2	»	...	»	27
1	»	...	»	28
1	»	...	»	32
4	»	...	»	33
3	»	...	»	35
3	»	...	»	36
4	»	...	»	37
1	»	...	»	42
9	»	...	»	45
1	»	...	»	47
1	»	...	»	48
1	»	...	»	48A
1	»	...	»	49
4	»	...	»	50
4	»	...	»	51
4	»	...	»	52
4	»	...	»	57
4	»	...	»	61
2	»	...	»	76



Nr. 70. Løbekran



Nr. 69. Racervogn

Presse,39,27; Brandbil,49,32. 3: Rutchebane, 50,33; Svingkran, 59,37. 4: Flyvemaskine,60,38; Omnibus,66,43. 5: Lokomotiv,67,44; Traktor,73,50. •Other notes: Intro on p3; photos of sets on pp 10,11,14,15. An extra model No.74, a small Mobile Crane (Transportabel Sækkeløfter), set unspecified, is also on p50, and 4 small, unnamed models are on p52. pp2,51 are blank. The printer is given on p52: S. MØLLER CHRISTENSEN 1/8 AARHUS.

There is a fair range of models, with a single drawing & list of parts for each. The model on the cover (right) isn't in the Manual (and on closer examination the Gears in it are the DDI type, not the MÄRKLIN pattern suggested in OSN 16. Apart from simple gearing none of the models have any mechanical features.

Most of the unusual parts can be seen in the models left and in the Racing Car above. The 2 Braced Girders in Set 5

aren't used in any of the models. The Large Gear is usually the DDI pattern but in one model it looks like the STABIL part with a large centre hole, and in the photo of the No.3 outfit (but not in the No.4 & 5) both size Gears are like MÄRKLIN with Gear Rings (18 & 40t) on Pulleys.

The 4 models on the back cover are shaded line drawing with no names or parts lists, and include Plates unlike any DDI parts, as in the Footbridge left.

HISTORY There are few clues beyond the suggestion of a date of c1935 in 10/266. The use of 'aa' instead of 'å' in the Manual indicates pre-1948, and none of the models look postwar. The manufacturer isn't mentioned in the Manual, the printer though was from Aarhus (aka Århus), a large town on the east coast of the Danish mainland.



DEN DANSKE INGENIØR: S4

OSN 30/882

SNIPPET: 'New' System FRAMA My thanks to Thomas Morzinck for drawing my attention to the No.1 Set of this seemingly simple German system, sold recently on Ebay. The box is blue and measures 25*30*2½cm. The large lid label is black on fawn and below is an improved B&W version of it (thanks to Thomas). The only indication of the age of the Set is the Aeroplane on it.

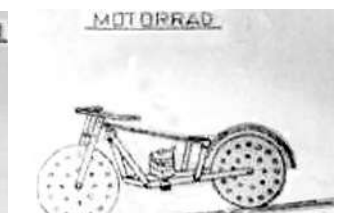
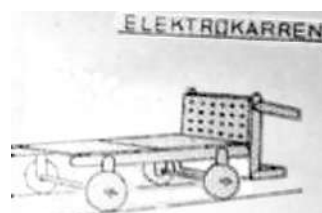


The main parts are attached to a white card, some held by clips and others by longish N&B. Most can be seen in the photo atop the next column – Strips with 3, 4, 5, 6, 8, & 9 holes; 4*6h Plates, 5h Ø Discs, and what look like 4 Pulleys of about 1½h diameter. In another photo are 7 A/Bs with



round holes in both lugs, 6 wide MÄRKLIN-type Double Brackets, and (probably) a Screwed Rod. The hole pitch scales at about 12mm.

The manual is in landscape format with small pages perhaps 12cm wide. It is B&W and the cover has the same illustration as the lid label. Inside are sketches of 7 models including the 2 below, a Crane, Scales (Waage), and a Hand Cart.



FRAMA: S1

OSN 30/882